# **Thinking About Costs**

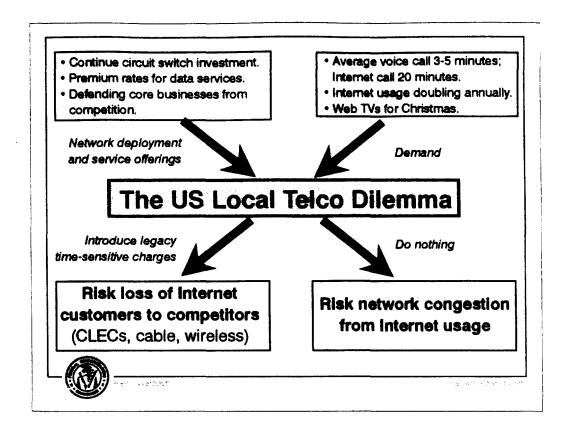
- Pro-competition, not pro-competitor
  - Ultimately, a minute is a minute and a bit is a bit.
  - Leveling the playing field up (efficient competitive markets for everyone) rather than down (applying monopoly regulations to new services).
- Determining the correct metric
  - Is a bit really always a bit?
  - Does VON have the same cost characteristics as streaming audio?
  - Implications of prioritization, quality of service, and synchronous vs. asynchronous communications.

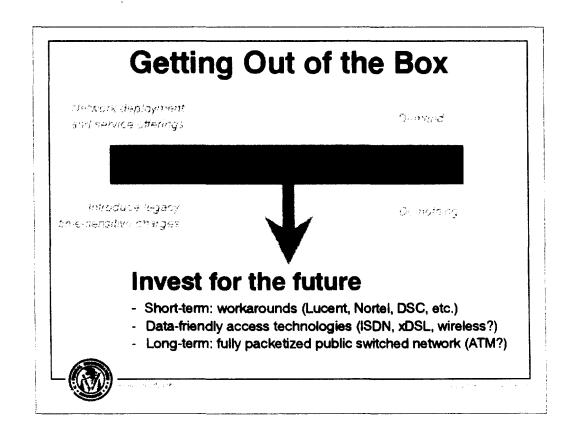


# **Empirical Questions ("facts")**

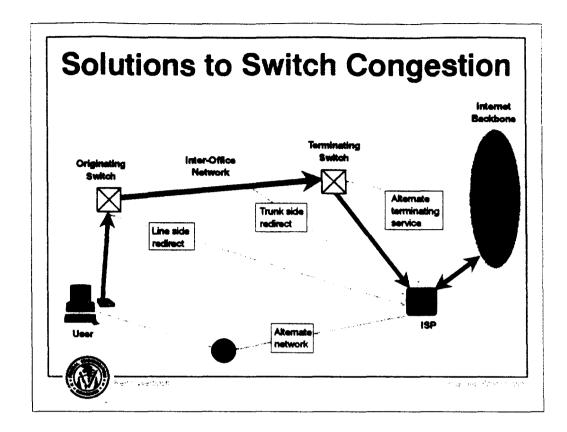
- Does flat-rated pricing cause over-use?
  - Why doesn't this happen with local calling in the US?
  - ISPs disconnect users after period of inactivity.
  - Revenue from demand stimulation (e.g., 2nd lines)?
- Does VON increase or decrease hold times?
- What is the "real" cost comparison of VON vs. conventional circuit-switched voice?
- What are the alternative access technologies, and why are they not more widely used?







13. gg/dg/



# **International Implications**

- International Internet telephony small now, but growing.
  - Gateway services being deployed
  - Huge price difference vs. circuit-switched carriers.
- What, if anything, is the problem?
  - Over-cost pricing
  - No competition
  - Arbitrage incentives
- Potential for significant pressure on the accounting rates system.



# **Regulatory Options**

- "Impose monopoly charges."
- "Do nothing and let network crumble."
- Utilize cost causation for pricing, and encourage investment in "data-friendly" technologies.
  - Facilitate inter- and intra-industry dialogue.
  - Identify and remove regulatory barriers to data-centric service deployment.
  - Develop "whole picture" data on network economics.
  - Create conditions for competitive entry.



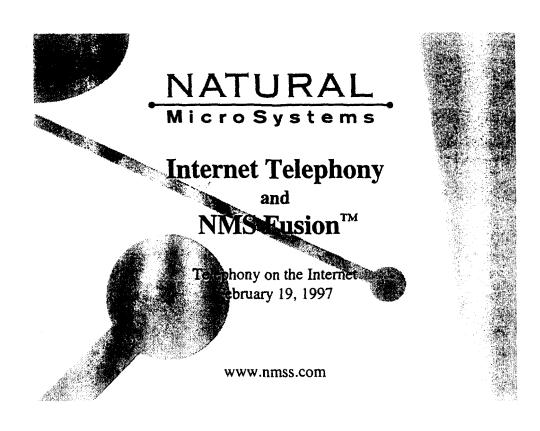
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## For More Information...

FCC Web Site http://www.fcc.gov/



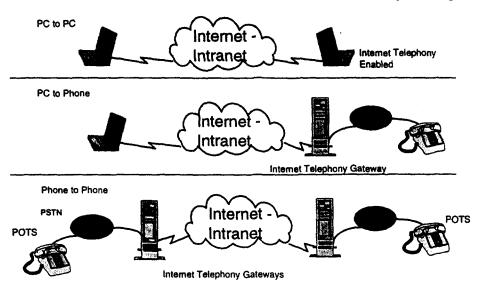
### **EXHIBIT C**



# Open Telecommunications<sup>tm</sup> ...beyond traditional CT markets

- The internet transforms the Telephony Market
- NMS unique products offer scalability to developers of Internet Telephony solutions
  - Call, Voice and Fax Processing hardware and software
  - Standards based compression
  - Real time encoders
  - Integrated TCP/IP access hardware and software
  - Internet Telephony software development environments

# **Evolution of Internet Telephony**



IP Telephony "Powered by NMS Fusion<sup>tm</sup>"

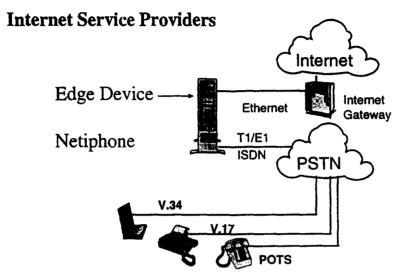
### Key Markets and Applications

#### **Inter-Exchange Carriers**

Long Distance Replacement - Inter-Tel



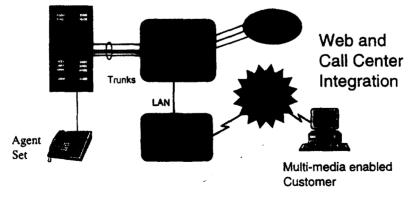
### Key Markets and Applications



IP Telephony "Powered by NMS Fusion<sup>tm</sup>"

#### **Key Markets and Applications**

#### Call Center integration with the Web



Lucent Internet Call Center



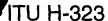
## Key Issues in Internet Telephony

- Voice Quality
- Bandwidth
- Standards
- Scalable Architectures

According to Jupiter Communications April 96 and NMS







- G.723.1 6.4Kbit encoder
- H-245 Call Control, Encoder Negotiation
- MS-GSM, G.729
- Intel Internet Phone
- Netscape Conference
- Microsoft NetMeeting











### Internet Telephony Architectures

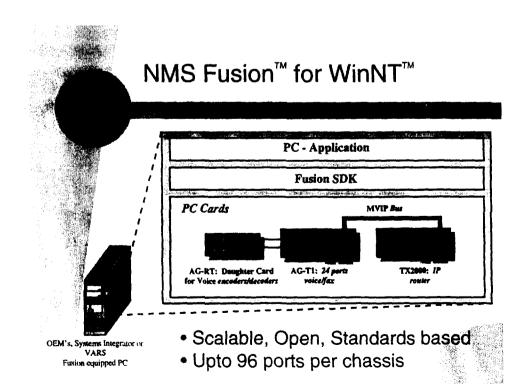
#### Current Model

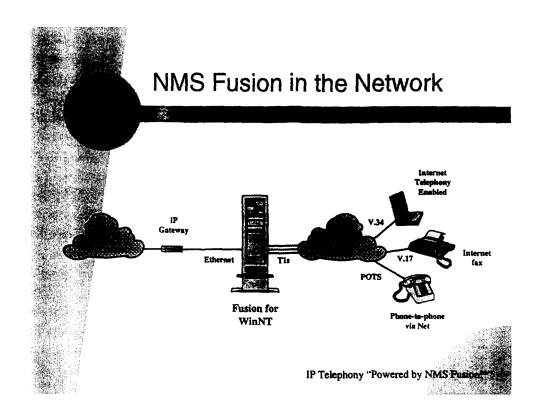
- Entry cost low, high incremental cost
- Work is done in the host
- -Simplistic, bogs host
- Adds delay
- Not scaleable

#### •New Model

- Low cost per port, small incremental cost
- Work is done on the boards
- Minimal host overhead
- Reduces delay
- Highly Scaleable

IP Telephony "Powered by NMS





## Value Proposition

- Maltimedia technology platform for Internet Telephony products
- Eeverages NMS existing product sets and provides time to market for scalable Internet Telephony solutions
- WinNT based fastest growing Internet Server OS

# Summary

- ernet Telephony is an explosive market
- The to market and scalability for Internet elephony solutions is critical
- MMS has a unique offering that addresses time to market for scalable Internet telephony solutions
- P Telephony "Powered by NMS Fusion

#### **CERTIFICATE OF SERVICE**

I, Michele Grasse, a secretary in the law office of Helein & Associates, P.C., do hereby state and affirm that copies of the foregoing "Initial Comments" were served via hand delivery, this 24th day of March, 1997, on the following:

Chairman Reed E. Hundt Federal Communications Commission 1919 M Street, N.W. Room 814 Washington, D.C. 20554

Commissioner James H. Quello Federal Communications Commission 1919 M Street, N.W. Room 802 Washington, D.C. 20554

Commissioner Rachelle B. Chong Federal Communications Commission 1919 M Street, N.W. Room 844 Washington, D.C. 20554

Commissioner Susan Ness Federal Communications Commission 1919 M Street, N.W. Room 832 Washington, D.C. 20554

William E. Kennard, General Counsel Office of the General Counsel Federal Communications Commission 1919 M Street, N.W. Room 614 Washington, D.C. 20554

Regina Keeney, Chief Common Carrier Bureau Federal Communications Commission 1919 M Street, N.W. Room 500 Washington, D.C. 20554 James D. Schlichting, Esq.
Chief, Competitive Pricing Division
Common Carrier Bureau
Federal Communications Commission
1919 M Street, N.W.
Room 518
Washington, D.C. 20554

Kevin Werbach, Esq.
Counsel, New Technology Policy
Common Carrier Bureau
Federal Communications Commission
1919 M Street, N.W.
Room 544
Wahington, D.C. 20554

Michele Grasse, Legal Secretary